

CLAIM AMENDMENTS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims

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Claim 1 (currently amended): A pump for pumping fluid in a vehicle having at least one fluid reservoir ~~while contained within a transmission, transfer case, or engine reservoir of a vehicle~~, said pump comprising:

a pump housing having a pump element;
an electric motor operatively attached to said pump housing;
a pumping chamber;
a the pump element operatively coupled to said electric motor;
said ~~pump~~ pumping chamber including an intake and an exit port therein for receiving fluid from said fluid reservoir and pumping fluid; and
at least one intake or exhaust port derived from porting configured in a surface adjacent to and not part of the pump;
wherein said pump is submerged within said fluid reservoir of said vehicle;
wherein said fluid reservoir is selected from the group consisting of a transmission, transfer case, engine reservoir, and combinations thereof.

Claim 2 (currently amended): The pump of claim 1 wherein there is a wall separating the motor from the pumping chamber and said wall includes an inlet or outlet port from said pumping chamber.

Claim 3 (currently amended): The pump of claim 1 wherein an inlet or outlet porting is provided into said pumping chamber, wherein said inlet or outlet porting comprises in an existing fixture of a transmission, transfer case or oil pan of a said vehicle.

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Claim 4 (currently amended): The pump of claim 3 wherein a port plate is provided between the pump housing for providing pump porting between the pump chamber, ~~said inlet or outlet porting in said fixture of said transmission, transfer case or~~ oil pan.

Claim 5 (currently amended): The pump of claim 4 wherein said port plate is an integral part of said pump housing.

Claim 6 (currently amended): The pump of claim 5 wherein said port plate is a portion of valve manifold plate for placement of said pump onto a valve manifold of a said transmission.

Claim 7 (currently amended): The pump of claim 1 wherein the said pump housing is an integral part of a valve manifold of a said transmission.

Claim 8 (Original): The pump of claim 2 wherein said wall includes an inlet for pumping fluid through said motor.

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Claim 9 (Original): The fluid pump of claim 1 wherein said motor pump is brushless.

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Claim 10 (currently amended): The pump of claim 1 wherein said pump element is selected from the group consisting of a gerotor set, piston, spur gear, vane, crescent centrifugal, turbine, regenerative type pump element, and combinations thereof.

Claim 11 (Original): The pump of claim 10 wherein the pump element is mounted on an armature shaft of said motor.

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Claim 12 (currently amended): The pump of claim 1 wherein said motor further comprises an outer armature stator with a series of coils therein and an inner armature which that is magnetically biased for self-centering of the said armature in the said stator.

Claim 13 (currently amended): The pump of claim 12 wherein a bearing is provided for said armature and the said stator is mounted in said housing for biasing the said armature toward the said bearing.

Claim 14 (currently amended): The pump of claim 12 wherein a bearing is provided for said armature, wherein and said stator is positioned for keeping selectively operable to prevent said armature off of from contacting said bearing.

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Claim 15 (currently amended): The pump of claim 12 wherein said armature includes a plurality of peripheral magnets separated by a space in between, wherein the spaces space in between said plurality of peripheral magnets is substantially minimized ~~are full~~ to prevent windage of said armature.

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Claim 16 (Original): The pump of claim 12 wherein said armature includes a polarized full round magnet for reducing windage.

Claim 17 (currently amended): The pump of claim 1 wherein ~~the~~ said pump is operable to respond ~~adapted for responding~~ to on demand requirements of ~~the~~ said engine, transmission or transfer case.

Claim 18 (currently amended): The pump of claim 17 wherein the on demand requirement is keeping ~~the~~ said transmission charged during engine off conditions.

Claim 19 (currently amended): The pump of claim 1 wherein ~~the~~ said pump is fully submerged in the fluid in said engine reservoir.

Claim 20 (currently amended): The pump of claim 1 wherein a motor controller is attached to said pump housing for controlling a brushless motor.

Claim 21 (currently amended): The pump of claim 1 wherein said pump housing is open to the said electric motor, allowing fluid to reach the said electric motor.

Claim 22 (currently amended): A submerged pump for pumping of fluid from at least one fluid reservoir of a vehicle, ~~from a transmission, transfer case, or oil reservoir~~ of said vehicle;

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said fluid pump comprising:

a submerged pump housing;

a motor situated in said pump housing and exposed to the fluid in the fluid reservoir;

said motor including a self centering armature therethrough;

a pump chamber at the base of said pump housing;

a pump element operably attached to said armature in said chamber for pumping fluid;

a surface adjacent to and not part of the pump housing and operatively associated with the pump chamber for providing inlet or outlet of fluid to the pump chamber contained in the pump housing, and said surface including at least one oil fill passage connecting said fluid reservoir to said pump chamber for intake and pumping of said oil from said fluid reservoir;

wherein said pump is submerged within said fluid reservoir of said vehicle;

wherein said fluid reservoir is selected from the group consisting of a transmission, transfer case, oil reservoir, and combinations thereof.